

Application No. 09/523,367
Amendment dated March 18, 2004
Reply to Office Action of November 19, 2003

REMARKS/ARGUMENTS

Claims 1-20 are pending in the application; the status of the claims is as follows:

Claims 8-12 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1, 6, 7, 13, 14, 17, and 18 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,151,073 to Steinberg, et al., ("Steinberg").

Claims 4, 5, and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Steinberg in view of U.S. Patent No. 6,069,659 to Nakajima ("Nakajima").

Claims 2, 3, 15, and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Steinberg in view of U.S. Patent No. 6,278,490 to Fukuda, et al., ("Fukuda").

Please note that an Information Disclosure Statement, along with a PTO Form 1449, was filed on March 10, 2000; however, we have not received a copy of the PTO Form 1449 initialed by the Examiner. Enclosed is a copy of the PTO-stamped postcard showing that the U.S. Patent and Trademark Office has received the Information Disclosure Statement and PTO Form 1449. The PTO-stamped postcard includes the correct title, however the serial number in the PTO stamp does not correspond to the present application. Acknowledgment of receipt of these documents is respectfully requested. Alternatively, if the documents have not been received by the Examiner, the Examiner is respectfully requested to contact the undersigned for duplicates of these documents.

The indication that the Examiner has approved the change to Fig. 4 and has no objections to the drawings, is noted with appreciation.

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Claims 1 and 14 have been amended to correct antecedent basis errors. Claim 19 has been amended to add the word "of". These changes are not necessitated by the prior art, are unrelated to the patentability of the invention over the prior art, and do not introduce any new matter.

The objection to claims 8-12 and 16 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, is respectfully traversed based on the following.

Claims 8-12 depend from independent base claim 1. As will be shown below, claim 1 is both unanticipated and nonobvious over the cited references of Steinberg, Nakajima, and Fukuda. Thus, claims 8-12 depend from unanticipated and nonobvious claim 1 and are unanticipated and nonobvious for at least the same reasons.

Claim 16 depends from independent base claim 14. As will be shown below, claim 14 is both unanticipated and nonobvious over the cited references of Steinberg, Nakajima, and Fukuda. Thus, claim 16 depends from unanticipated and nonobvious claim 14 and is unanticipated and nonobvious for at least the same reasons.

Accordingly, it is respectfully requested that the objection to claims 8-12 and 16 as being dependent upon a rejected base claim, be reconsidered and withdrawn.

35 U.S.C. § 102(e) Rejection

The rejection of claims 1, 6, 7, 13, 14, 17, and 18 under 35 U.S.C. § 102(e) as being anticipated by Steinberg, is respectfully traversed based on the following.

Claim 1 includes the limitation of a detector for detecting an amount of the electrical load accumulation "when using a flash exposure for a duration of the flash exposure." In other words, the detector is detecting this electrical load accumulation when

an actual image is being taken. That this flash exposure control occurs when an actual image is being taken is clearly illustrated in FIGs. 4 and 5 of the present application. One advantage of such a system is that the light adjusting control is then based upon the actual image being taken.

In contrast, Steinberg does not detect an amount of the electrical load accumulation when using a flash exposure for a duration of the flash exposure. FIG. 2 of Steinberg clearly shows that all flash parameters are set by the time step 56 (Determine exposure with flash) is completed. Figure 3 provides greater detail about how this exposure with flash is determined. The key is that all of the flash parameters are determined before step 58, in which the actual picture is taken. In other words, Steinberg detects an amount of the electrical load accumulation when using a flash exposure not for the duration of the flash exposure, but prior to duration of the flash exposure. Thus, Steinberg does not disclose a detector for detecting an amount of the electrical load accumulation when using a flash exposure for a duration of the flash exposure. Because Steinberg's disclosed timing is not that required by claim 1, Steinberg cannot anticipate the digital camera of claim 1.

Claims 6, 7, and 13 depend from unanticipated claim 1 and thus are unanticipated for at least the same reasons. Moreover, claims 6, 7, and 13 include additional limitations not found in Steinberg. With respect to claim 6, the Office Action asserts Steinberg discloses a detection signal that corresponds to an average of the amount of the electrical load accumulation as required by claim 6. In fact, the indicated sections of Steinberg disclose only a histogram of electrical load accumulation. A histogram is merely a distribution plot showing the number of occurrences of a particular electrical load accumulation as a function of electrical load accumulation. Thus, while the data required to generate a histogram may be used to find an average, Steinberg clearly does not disclose finding an average. Why Steinberg uses a histogram is clear in FIG. 6B, in which the intensities are scaled to provide maximum image contrast, i.e., an optimized histogram distribution. Therefore, because Steinberg does not disclose use of a detection signal that

corresponds to an average of the amount of electrical load accumulation, Steinberg cannot anticipate claim 6.

With respect to claim 7, as Steinberg does not disclose use of an average electrical load accumulation, Steinberg cannot disclose a weighted average electrical load accumulation. Thus, even though Steinberg may disclose using a weighted histogram to determine an appropriate scaling factor to optimize histogram distribution, this is not the same as a weighted average electrical load accumulation as found in claim 7. Therefore, Steinberg fails to disclose a limitation of claim 7, and thus cannot anticipate claim 7.

Lastly, with respect to claim 13, the Office Action asserts that column 8, lines 40+ of Steinberg disclose adjusting a location of the predetermined photoreceptor elements according to photographing conditions. In fact, the indicated section only notes that the image sampling can be weighted in different manners, with the preferred manner having the center portion of the image most heavily weighted. There is no disclosure that the location of predetermined photoreceptor elements can be adjusted, only the weighting of the photoreceptor elements at predetermined locations. Thus, Steinberg fails to disclose a limitation of claim 13, and thus cannot anticipate claim 13.

Claim 14, similar to claim 1, requires detecting an amount of the electrical load accumulation when using a flash exposure for a duration of the flash exposure. As discussed above, Steinberg fails to disclose detecting the accumulation for a duration of the flash exposure, but rather detects the accumulation of pre-flashes prior to final exposure. Further, the controller of claim 14 controls the duration of the flash exposure. In Steinberg, the controller does not control the duration of the flash exposure, but rather “an optimum flash energy for optimum exposure,” column 4, lines 33 and 34, emphasis added. Therefore, Steinberg fails to disclose at least these two limitations found in claim 14 and thus cannot anticipate claim 14.

Claim 17 depends from unanticipated claim 14 and is unanticipated for at least the same reasons. Claim 17, similar to claim 13, further includes the limitation that the

location of the predetermined photoreceptor is adjusted according to photographic conditions. As noted above, Steinberg's predetermined photoreceptors have a fixed location, however, their weighting factor can be altered. As altering a weighting factor and altering a location are not the same, Steinberg cannot anticipate claim 17.

Claim 18 corresponds to a method for light adjusting control and is based, in part, upon outputting a detection signal of a detected amount of accumulated electrical load for a duration of the flash exposure. As with claim 1, Steinberg does not disclose a detection signal based upon the accumulated electrical load for a duration of the flash exposure, but only for a pre-exposure flash. Since Steinberg fails to disclose a limitation of claim 18, Steinberg cannot anticipate claim 18.

Accordingly, it is respectfully requested that the rejection of claims 1, 6, 7, 13, 14, 17, and 18 under 35 U.S.C. § 102(e) as being anticipated by Steinberg, be reconsidered and withdrawn.

35 U.S.C. § 103(a) Rejections

The rejection of claims 4, 5, and 20 under 35 U.S.C. § 103(a), as being unpatentable over Steinberg in view of Nakajima, is respectfully traversed based on the following.

As shown above, Steinberg fails to disclose, or even suggest, detecting an amount of the electrical load accumulation for a duration of flash exposure, a limitation of claim 1, from which claims 4 and 5 depend. Further, the combination of Steinberg and Nakajima fails to disclose or suggest this limitation of claim 1. Nakajima, like Steinberg, initiates one or more flashings prior to the main flashing as shown in each of FIGs. 2-6. Thus, control of the main flashing is based not upon electrical load accumulation for the duration of the flashing, but rather upon one or more preliminary flashings prior to the main flashing. Thus, the combination of Steinberg and Nakajima fails to disclose or suggest a limitation of claim 1, and therefore cannot render claim 1 obvious.

Claims 4 and 5 depend from nonobvious claim 1 and are therefore nonobvious over the combination of Steinberg and Nakajima for at least the same reasons. Claims 4 and 5 are nonobvious over the combination of Steinberg and Nakajima for additional reasons as well. Claim 4 includes the limitation that the flash exposure be a plurality of high-speed light pulses at predetermined intervals. This is clearly shown in FIG. 5 of the present application in which the pulses occur when the actual image is being taken. In contrast, neither Steinberg nor Nakajima disclose or suggest that the flash exposure is a plurality of high-speed light pulses. Steinberg does not disclose any high-speed light pulses. As seen in each of FIGs. 2, 4, 5, and 6 of Nakajima, a series of preliminary and/or dummy flashings occur prior to the main flashing. Further, each main flashing is a single pulse, not a plurality of high-speed light pulses. Therefore, the combination of Steinberg and Nakajima fails to disclose or suggest a flash exposure that is a plurality of high-speed light pulses. Because the combination of Steinberg and Nakajima fails to disclose or suggest such a plurality of high-speed light pulses, the combination of Steinberg and Nakajima cannot render obvious claim 4.

With respect to claim 5, because the combination of Steinberg and Nakajima fails to disclose a flash exposure that includes a plurality of high-speed light pulses, the combination of Steinberg and Nakajima cannot disclose controlling a flash exposure by controlling the number of high-speed light pulses in the exposure. For this reason, the combination of Steinberg and Nakajima cannot render obvious claim 5.

Claim 20 depends from nonobvious claim 18 and is therefore nonobvious over the combination of Steinberg and Nakajima for at least the same reasons as discussed above with respect to claim 1. Claim 20 is similar to claim 4 as claim 20 includes the limitation that the flash exposure be a plurality of high-speed light pulses at predetermined intervals. For this reason, claim 20 is nonobvious over the combination of Steinberg and Nakajima as the combination of Steinberg and Nakajima does not disclose or suggest a flash exposure that is a plurality of high-speed light pulses. Because the combination of

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Steinberg and Nakajima fails to disclose or suggest such a plurality of high-speed light pulses, the combination of Steinberg and Nakajima cannot render obvious claim 20.

Accordingly, it is respectfully requested that the rejection of claims 4, 5, and 20 under 35 U.S.C. § 103(a) as being unpatentable over the Steinberg patent in view of the Nakajima patent, be reconsidered and withdrawn.

The rejection of claims 2, 3, 15, and 19 under 35 U.S.C. § 103(a) as being unpatentable over the Steinberg patent in view of the Fukuda patent is respectfully traversed based on the following.

As shown above, Steinberg fails to disclose, or even suggest, detecting an amount of the electrical load accumulation for a duration of flash exposure and basing light adjusting control on this detected electrical load accumulation. Further, the combination of Steinberg and Fukuda fails to disclose these limitations of claim 1. Fukuda discloses a double exposure process with a short exposure followed by a longer exposure, with the final image being a synthesis of the short and long exposures. This technique is shown in FIGs. 16-19 of Fukuda. Looking first at FIG. 16, during a first field a low intensity flash occurs in conjunction with a short signal accumulation. The signal accumulation is reset at the end of the first field and then the second field having a longer duration signal accumulation occurs. It is during this second field that a high intensity flash occurs in FIG. 16, or a series of low intensity flashes occurs as in FIG. 17. These two embodiments are described starting at column 17, line 1 and continuing through column 18, line 46. Although Fukuda discloses either a single high intensity flash or a series of low intensity flashes, Fukuda does not disclose basing light adjusting control on the detected electrical load accumulation. In other words, Fukuda does not alter the intensity of the flash or the number of flashes based upon the detected electrical load accumulation, i.e., there is no light adjusting control. Therefore, the combination of Steinberg and Fukuda does not disclose or suggest detecting the electrical load accumulation and accomplishing light adjusting control based on the detected electrical load accumulation. Because these

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limitations of claim 1 are not disclosed or suggested by the combination of Steinberg and Fukuda, the combination of Steinberg and Fukuda cannot render claim 1 obvious. Claims 2 and 3 depend from nonobvious claim 1 and are nonobvious over the combination of Steinberg and Fukuda for at least the same reasons.

Apparatus claim 14, similar to claim 1, requires detecting the electrical load accumulation and accomplishing light adjusting control based upon the detected electrical load accumulation. As discussed above, these limitations are not disclosed or suggested by the combination of Steinberg and Fukuda, and thus claim 14 is not rendered obvious by the combination of Steinberg and Fukuda. Claim 15 depends from nonobvious claim 14 and is nonobvious over the combination of Steinberg and Fukuda for at least the same reasons.

Method claim 18, similar to claim 1, requires detecting the electrical load accumulation and accomplishing light adjusting control based upon the detected electrical load accumulation. As discussed above, these limitations are not disclosed or suggested by the combination of Steinberg and Fukuda, and thus claim 18 is not rendered obvious by the combination of Steinberg and Fukuda. Claim 19 depends from nonobvious claim 18 and is nonobvious over the combination of Steinberg and Fukuda for at least the same reasons.

Accordingly, it is respectfully requested that the rejection of claims 2, 3, 15, and 19 under 35 U.S.C. § 103(a) as being unpatentable over the Steinberg patent in view of the Fukuda patent, be reconsidered and withdrawn.

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CONCLUSION

Wherefore, in view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

This Amendment does not increase the number of independent claims, does not increase the total number of claims, and does not present any multiple dependency claims. Accordingly, no fee based on the number or type of claims is currently due. However, if a fee, other than the issue fee, is due, please charge this fee to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260.

Any fee required by this document other than the issue fee, and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

Any other fee required for such Petition for Extension of Time and any other fee required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee,

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and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

Respectfully submitted,

By: Mark A. Dodd
Mark A. Dodd
Registration No. 45,729
Attorney for Applicant

MAD:pm:jk:bar
SIDLEY AUSTIN BROWN & WOOD LLP
717 N. Harwood, Suite 3400
Dallas, Texas 75201
Direct: (214) 981-3481
Main: (214) 981-3300
Facsimile: (214) 981-3400
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